"The activity of the discharge seems to vary—thus, immediately before or after the menstrual period it is less active.

"The same discharge would succeed in some cases and not in others, and though failing to produce a specific pustule one day it would not on another.

"As in vaccination, the admixture of a little blood in making the inoculation generally rendered it nugatory.

"The more robust and vigorous the patient, the more perfect was the inoculation, and the more persistent it became, being indeed difficult to heal.

"Every succeeding generation from the vaginal discharge seemed progressively to increase in inoculative power.

"The more infected the recipient the more difficult to inoculate, and the greater the tendency to heal.

"Every succeeding inoculation on the patient's own person seemed to increase in inoculative power."

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60. *Investigations as to the Cause of the Great Gravity of Anthrax and Furuncles of the Face.*—The numbers of the *Archives Générales de Médecine* for June, July, and August last, contain an elaborate article on this subject, by J. L. Reveratin, Interne Lauréat des Hôpitaux.

The following are his conclusions:—

1. Anthrax and furuncle of the face are very grave affections.
2. This gravity is owing to their being prone to be complicated with phlebitis.
3. Facial phlebitis tends to a fatal termination, either by its extending to the sinus of the dura mater, or by becoming the source of purulent infection.
4. Anthrax in the lips are complicated more frequently than when situated in other parts of the face with phlebitis, which fact is to be accounted for by the particular structure of the lips.
5. Anthrax of the lips is entirely different from malignant pustule.
6. The extension of phlebitis to the orbit, shown by the presence of exophthalmia, shows almost positively that the sinus has become affected.
7. Incision, made as rapidly and as largely as possible, appears to be the best means of preventing and sometimes of arresting the complication of phlebitis.

OPHTHALMOLOGY.

61. *Calabar Bean in Suppuration of the Cornea.*—M. Galezowski expresses himself (*Annuaire de Thérapeutique*, 1870) in favour of the instillation of solution of Calabar bean in the treatment of this form of ophthalmic disease. The contractile action exerted by the bean on the vessels of the cornea opposes their dilatation and congestion, and singularly aids the cicatrization of wounds. Belladonna, which produces opposite effects, should, he thinks, be discarded in these affections.—*The Practitioner*, July, 1870, from *Annuaire de Thérapeutique*, 1870.

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62. *Luxation of the Lens; Mechanism of Accommodation.*—M. Dufour reports three cases, of which the two first particularly allowed of conclusions being drawn as to the state of the accommodation. When, according to the theory of Helmholtz, the lens in the state of rest of the accommodation is kept by the zonula stretched out and flattened, then it may be expected that the (luxated) lens freed from the zonula would be the more convex; it must, therefore, by lens-luxation appear short-sightedness, which is yet more increased when the lens falls into the anterior chamber, so that the space between it and the cornea is abolished. The investigation of the cases (three brothers and sisters, all of them suffering from spontaneous luxation of the lens of both eyes) corroborated the above opinion completely.

In the first case the lens in the left lay chiefly, with exception of its upper border, in the anterior chamber, therewith myopia, about ⅓—½ (with much amblyopia) subsisted; in the right, by simple dislocation of the lens inwards, the myopia reached only $\frac{1}{4}$; accommodation seemed not to be present. The myopia cannot be due to sclerectasia posterior, the ophthalmoscopic appearances of it were altogether wanting, and the eye was not of a myopic shape. Moreover, by extraction of the lens the left eye was very hypermetropic ($\frac{1}{3}$), more so than it ought to be by previous emmetropia. After a longer time the lens in the right eye fell into the anterior chamber, by which increase of the myopia to about $\frac{1}{3}$; after extraction, hypermetropia $\frac{1}{3}$—$\frac{1}{2}$, with some irregular astigmatism.

In the second case, in the left eye the edge of the lens extended across the pupillary region; the oblique position of the lens induced monocular diplopia, whereby the one image with half the lens, the other without it, was projected. The refraction corresponding to the part of the pupil independent of the lens was hyp. $\frac{1}{15}$, whereas the part corresponding to that yet furnished with lens, myop. $\frac{1}{2}$. The difference in the refrangibility of the two parts of the same eye, $\frac{1}{1\frac{1}{3}}$, is in this much greater than the effect of the lens in a state of rest of the accommodation corresponds to, it betokens much more an accommodation of 4—5 inch distance. (In the right eye of this person the lens had fallen down altogether into the vitreous; it suffered from very considerable amblyopia.)

The action of the mere advance of the lens by evacuation of the aqueous humour Dufour found by repeated experimentation to be equal to an increase of refrangibility of about $\frac{1}{12}$—$\frac{1}{14}$, in accordance with previous definitions of Von Graefe's.—*British and Foreign Med.-Chir. Rev.*, July, 1870, from *Centralblatt*, March 12, 1870.

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63. *Structure of the Zonula Ciliaris.*—Dr. F. MERKEL, in a recent Dissertation gives the results of his researches respecting this structure of the eye, and which he states demonstrate the zonula to present a triangular form on section, and that it arises from the apices of the ciliary processes and extends to the margin of the capsule, of the lens, to the anterior and posterior surfaces of which it is attached. The so-called canal of Petit does *not* exist in the living animal, and the zonula contains no fluid but what it is capable of imbibing. It commences at the pars ciliaris of the retina, to which it is most intimately connected; and here consists of the fibres so well described by Henle, which can be easily demonstrated by tearing away the zonula in an eye that has been soaked for a few hours in a solution of chromic acid containing one-sixth of a grain per ounce. The fibres are very fine, stiff, and straight, and are probably not united into a membrane, but lie free on the surface of the vitreous. They are to a certain extent elastic, as they often assume a wavy form. Near the commencement of the zonula ciliaris are numerous cells, each with large nucleus and small amount of cell-substance, which form only a single layer, though by no means lying in the same plane. Besides these most posteriorly situated fibres, the ciliary zone, as it passes forwards towards the apices of the ciliary processes, increases considerably in extent by the accession of fresh fibres. The fibres pursue three main directions: a few turn back and end in the vitreous, the majority run from the apices of the ciliary processes towards the lens, and a few run circularly; the latter have a more internal position than the former. Dr. Merkel considers the canal of Petit (so generally admitted) to be an illusion, and due to the facility with which the fibres break down and separate from each other; and he supports his view by reference to the results obtained by injections made with Prussian blue, and by preparations made by staining with nitrate of silver. In neither case can the presence of a distinct membrane be demonstrated. In regard to the physiological value of the zonula, Dr. Merkel entirely accords with the views expressed by Schwalbe—that it constitutes the antagonist of musculus ciliaris, and effects the flattening of the lens.

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64. *Lymphatic Spaces of the Eye.*—The last number of the *Quarterly Journal of Microscopical Science* contains a good *résumé* of SCHWALBE's paper on the lymphatic spaces of the eye, contributed to the first part of Schultze's *Archives of Microscopical Anatomy* for the present year. In this paper are

described the lymphatic spaces of the posterior division of the eyeball, which include the perivascular spaces of the retina, the perichoroid space with its efferent channels, and, finally, a lymphatic space between the outer and inner sheaths of the optic nerve, which, without communicating with the other two, opens directly into the arachnoid sac of the brain. Between the inner surface of the sclerotica and the outer layer of the choroid is a space which was recognized by Arnold as a serous cavity, and to which the name "arachnoidea oculi" might be given. It is distinct from the lamina fusca, though in part occupied by connective tissue, elastic fibres, and stellate pigment cells. The opposed surfaces are smooth and shining, and, after treatment with nitrate of silver, exhibit epithelial markings with oval nuclei. It is most distinct in white rabbits, but cannot be demonstrated in the eye of man, on account of the difficulty of obtaining fresh human eyes. When filled with a coloured fluid by injection, the space was found to reach backward to the neighbourhood of the entrance of the optic nerve, and forward as far as just under the ciliary processes. The injection left the ball at four points corresponding to the entrance of the venæ vorticosæ, and cross sections showed that the veins were encircled by the injection. On escaping from the globe, the injection filled the capsule of Tenon, which again was found to communicate backwards, by a cylindrical channel surrounding the outer fascia of the optic nerve, with the arachnoid space of the skull. Besides the canal just spoken of as surrounding the whole optic nerve, to which the author gives the name "supravaginal" space, there is another included between the two fasciæ of this nerve, which he calls the "subvaginal." This is continuous with the arachnoid, but does not communicate with the proper lymphatic spaces of the eye.—*Lancet*, May 7th, 1870.

MIDWIFERY.

65. *Dystocia depending on the Simultaneous Presentation of the Two Heads of Twins.*—Dr. Rinter was called by a midwife to a woman twenty-eight years of age. In this case the child's head, after a breech presentation, was locked by complete absence of uterine contraction. Dr. Rinter found the whole child born save the head, the uterus inert, and the mother very feverish. The child was dead, and in vain did the accoucheur try to find, with his finger, the chin or the mouth; he could only feel the cranial bones without succeeding in making out the sutures. By the hand laid on the abdomen the presence of a second fœtus was made out. Tractions on the trunk of the child already extruded were unsuccessful. At last the forceps were used, and with much difficulty the head was extracted; but the operator was dismayed on seeing that it belonged to the *second* fœtus. The cord was soon divided, and a living boy handed to the nurse. The head of the *first* child was now sought for, the chin and mouth easily found, and the extraction effected. The placenta followed immediately; it was very large, and common to both children. The mother did well. Happily Dr. Rinter did not resolve to *diminish* the head when he found it so completely locked, and the child dead.—*Lancet*, July 2, 1870, from *Gaz. Méd. de Strasbourg.*

66. *On the Influence exerted by Chloral on the Pain of Parturition.*—The *Edinburgh Medical Journal* for August, 1870, contains an interesting article on this subject by E. Lambert, Esq. The following are the author's conclusions:—

1. Chloral is an agent of great value in the relief of pain during parturition.
2. It may be administered under favourable circumstances during and at the close of the second stage, with the result of producing absolute unconsciousness in the same sense in which we understand unconsciousness under chloroform.
3. When thus given successfully, it has this advantage over chloroform, that it requires no interference with the patient.
4. It is desirable to retain chloroform in the position which it at present